

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 15:57:27 ON 25 JUN 2008

=> fil .bec

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 15:58:06 ON 25 JUN 2008
ALL COPYRIGHTS AND RESTRICTIONS APPLY. SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s luciferase#

FILE 'MEDLINE'

L1 22691 LUCIFERASE#

FILE 'SCISEARCH'

L2 17249 LUCIFERASE#

FILE 'LIFESCI'

L3 8542 LUCIFERASE#

FILE 'BIOTECHDS'

L4 4162 LUCIFERASE#

FILE 'BIOSIS'

L5 21799 LUCIFERASE#

FILE 'EMBASE'

L6 16575 LUCIFERASE#

FILE 'HCAPLUS'

L7 23410 LUCIFERASE#

FILE 'NTIS'

L8 163 LUCIFERASE#

FILE 'ESBIOBASE'

L9 12125 LUCIFERASE#

FILE 'BIOTECHNO'

L10 8370 LUCIFERASE#

FILE 'WPIDS'

L11 3750 LUCIFERASE#

TOTAL FOR ALL FILES

L12 138836 LUCIFERASE#

=> s l12(5a) split

FILE 'MEDLINE'

26073 SPLIT

L13 28 L1 (5A) SPLIT

FILE 'SCISEARCH'

47728 SPLIT

L14 32 L2 (5A) SPLIT

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FILE 'LIFESCI'
      6466 SPLIT
L15      11 L3 (5A) SPLIT

FILE 'BIOTECHDS'
      885 SPLIT
L16      9 L4 (5A) SPLIT

FILE 'BIOSIS'
      32432 SPLIT
L17      17 L5 (5A) SPLIT

FILE 'EMBASE'
      23016 SPLIT
L18      20 L6 (5A) SPLIT

FILE 'HCAPLUS'
      69477 SPLIT
L19      43 L7 (5A) SPLIT

FILE 'NTIS'
      5129 SPLIT
L20      0 L8 (5A) SPLIT

FILE 'ESBIOBASE'
      9972 SPLIT
L21      12 L9 (5A) SPLIT

FILE 'BIOTECHNO'
      3838 SPLIT
L22      6 L10(5A) SPLIT

FILE 'WPIDS'
      83993 SPLIT
L23      1 L11(5A) SPLIT

TOTAL FOR ALL FILES
L24      179 L12(5A) SPLIT

=> s fragment?(10a)(complement? or reconstitut?)
FILE 'MEDLINE'
      310603 FRAGMENT?
      268009 COMPLEMENT?
      41351 RECONSTITUT?
L25      3854 FRAGMENT?(10A)(COMPLEMENT? OR RECONSTITUT?)

FILE 'SCISEARCH'
      284164 FRAGMENT?
      187574 COMPLEMENT?
      41900 RECONSTITUT?
L26      3052 FRAGMENT?(10A)(COMPLEMENT? OR RECONSTITUT?)

FILE 'LIFESCI'
      110150 FRAGMENT?
      68007 COMPLEMENT?
      16873 RECONSTITUT?
L27      2308 FRAGMENT?(10A)(COMPLEMENT? OR RECONSTITUT?)

FILE 'BIOTECHDS'
      60609 FRAGMENT?
      31025 COMPLEMENT?
      1809 RECONSTITUT?

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L28          3867 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'BIOSIS'
    285237 FRAGMENT?
    298370 COMPLEMENT?
    48471 RECONSTITUT?
L29          5728 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'EMBASE'
    207484 FRAGMENT?
    232948 COMPLEMENT?
    36906 RECONSTITUT?
L30          3254 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'HCAPLUS'
    444126 FRAGMENT?
    234191 COMPLEMENT?
    51442 RECONSTITUT?
L31          6702 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'NTIS'
    14028 FRAGMENT?
    13432 COMPLEMENT?
    1145 RECONSTITUT?
L32          58 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'ESBIOBASE'
    106001 FRAGMENT?
    68120 COMPLEMENT?
    23369 RECONSTITUT?
L33          1641 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'BIOTECHNO'
    104598 FRAGMENT?
    106088 COMPLEMENT?
    15197 RECONSTITUT?
L34          2166 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

FILE 'WPIDS'
    105486 FRAGMENT?
    104232 COMPLEMENT?
    7808 RECONSTITUT?
L35          3896 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

TOTAL FOR ALL FILES
L36          36526 FRAGMENT?(10A) (COMPLEMENT? OR RECONSTITUT?)

=> s 112(10a)136
FILE 'MEDLINE'
L37          12 L1 (10A)L25

FILE 'SCISEARCH'
L38          11 L2 (10A)L26

FILE 'LIFESCI'
L39          4 L3 (10A)L27

FILE 'BIOTECHDS'
L40          5 L4 (10A)L28

FILE 'BIOSIS'
L41          5 L5 (10A)L29

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FILE 'EMBASE'
L42          11 L6 (10A)L30

FILE 'HCAPLUS'
L43          30 L7 (10A)L31

FILE 'NTIS'
L44          1 L8 (10A)L32

FILE 'ESBIOBASE'
L45          5 L9 (10A)L33

FILE 'BIOTECHNO'
L46          3 L10(10A)L34

FILE 'WPIDS'
L47          2 L11(10A)L35

TOTAL FOR ALL FILES
L48          89 L12(10A) L36

=> s (124 or 148) not 2005-2008/py
FILE 'MEDLINE'
      2322865 2005-2008/PY
              (20050000-20089999/PY)
L49          13 (L13 OR L37) NOT 2005-2008/PY

FILE 'SCISEARCH'
      4308667 2005-2008/PY
              (20050000-20089999/PY)
L50          12 (L14 OR L38) NOT 2005-2008/PY

FILE 'LIFESCI'
      509512 2005-2008/PY
L51          4 (L15 OR L39) NOT 2005-2008/PY

FILE 'BIOTECHDS'
      86601 2005-2008/PY
L52          4 (L16 OR L40) NOT 2005-2008/PY

FILE 'BIOSIS'
      1951309 2005-2008/PY
L53          10 (L17 OR L41) NOT 2005-2008/PY

FILE 'EMBASE'
      2002250 2005-2008/PY
L54          10 (L18 OR L42) NOT 2005-2008/PY

FILE 'HCAPLUS'
      4799065 2005-2008/PY
L55          22 (L19 OR L43) NOT 2005-2008/PY

FILE 'NTIS'
      52901 2005-2008/PY
L56          1 (L20 OR L44) NOT 2005-2008/PY

FILE 'ESBIOBASE'
      1144073 2005-2008/PY
L57          7 (L21 OR L45) NOT 2005-2008/PY

FILE 'BIOTECHNO'

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0 2005-2008/PY
L58 7 (L22 OR L46) NOT 2005-2008/PY

FILE 'WPIDS'

4229710 2005-2008/PY
L59 0 (L23 OR L47) NOT 2005-2008/PY

TOTAL FOR ALL FILES

L60 90 (L24 OR L48) NOT 2005-2008/PY

=> dup rem l60

PROCESSING COMPLETED FOR L60

L61 27 DUP REM L60 (63 DUPLICATES REMOVED)

=> d tot

L61 ANSWER 1 OF 27 MEDLINE on STN DUPLICATE 1
TI Kinetics of regulated protein-protein interactions revealed with firefly luciferase complementation imaging in cells and living animals.
SO Proceedings of the National Academy of Sciences of the United States of America, (2004 Aug 17) Vol. 101, No. 33, pp. 12288-93. Electronic Publication: 2004-07-29.
Journal code: 7505876. ISSN: 0027-8424.
AU Luker Kathryn E; Smith Matthew C P; Luker Gary D; Gammon Seth T; Piwnica-Worms Helen; Piwnica-Worms David
AN 2004424640 MEDLINE

L61 ANSWER 2 OF 27 MEDLINE on STN DUPLICATE 2
TI High-throughput sensing and noninvasive imaging of protein nuclear transport by using reconstitution of split Renilla luciferase.
SO Proceedings of the National Academy of Sciences of the United States of America, (2004 Aug 10) Vol. 101, No. 32, pp. 11542-7. Electronic Publication: 2004-08-02.
Journal code: 7505876. ISSN: 0027-8424.
AU Kim Sung Bae; Ozawa Takeaki; Watanabe Shigeaki; Umezawa Yoshio
AN 2004401877 MEDLINE

L61 ANSWER 3 OF 27 MEDLINE on STN DUPLICATE 3
TI Molecular imaging of drug-modulated protein-protein interactions in living subjects.
SO Cancer research, (2004 Mar 15) Vol. 64, No. 6, pp. 2113-9.
Journal code: 2984705R. ISSN: 0008-5472.
AU Paulmurugan Ramasamy; Massoud Tarik F; Huang Jing; Gambhir Sanjiv S
AN 2004133506 MEDLINE

L61 ANSWER 4 OF 27 MEDLINE on STN DUPLICATE 4
TI Molecular imaging of homodimeric protein-protein interactions in living subjects.
SO The FASEB journal : official publication of the Federation of American Societies for Experimental Biology, (2004 Jul) Vol. 18, No. 10, pp. 1105-7. Electronic Publication: 2004-05-07.
Journal code: 8804484. E-ISSN: 1530-6860.
AU Massoud Tarik F; Paulmurugan Ramasamy; Gambhir Sanjiv S
AN 2004326355 MEDLINE

L61 ANSWER 5 OF 27 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Molecular imaging of homodimeric protein-protein interactions in living subjects
SO FASEB JOURNAL, (MAY 2004) Vol. 18, No. 7, pp. 1105-+.
ISSN: 0892-6638.

AU Massoud T F; Paulmurugan R; Gambhir S S (Reprint)
AN 2004:551653 SCISEARCH

L61 ANSWER 6 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
TI High-Throughput Sensing and Noninvasive Imaging of Protein Nuclear
Transport by Using Reconstitution of Split Renilla
Luciferase Edited by Kim SB, Ozawa T, Watanabe S, Umezawa Y
SO Assay and Drug Development Technologies (2004), 2(6), 703-704
CODEN: ADDTAR; ISSN: 1540-658X
AU Auld, Doug
AN 2005:141724 HCAPLUS

L61 ANSWER 7 OF 27 MEDLINE on STN DUPLICATE 5
TI Optimizing luciferase protein fragment
complementation for bioluminescent imaging of protein-protein
interactions in live cells and animals.
SO Methods in enzymology, (2004) Vol. 385, pp. 349-60. Ref: 31
Journal code: 0212271. ISSN: 0076-6879.
AU Luker Kathryn E; Piwnica-Worms David
AN 2004232080 MEDLINE

L61 ANSWER 8 OF 27 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Flashing a protein-protein interaction in living cells via split
Renilla luciferase complementation.
SO Luminescence (Chichester), (May 2004) Vol. 19, No. 3, pp. 149. print.
Meeting Info.: 13th International Symposium on Bioluminescence and
Chemiluminescence. Yokohama, Japan. August 02-06, 2004.
ISSN: 1522-7235 (ISSN print).
AU Kaihara, A.; Umezawa, Y.
AN 2005:27427 BIOSIS

L61 ANSWER 9 OF 27 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Molecular imaging of homodimeric protein-protein interactions in living
subjects.
SO FASEB Journal, (May 2004) Vol. 18, No. 7. print.
ISSN: 0892-6638 (ISSN print).
AU Massoud, Tarik F.; Paulmurugan, Ramasamy; Gambhir, Sanjiv S. [Reprint
Author]
AN 2004:322534 BIOSIS

L61 ANSWER 10 OF 27 MEDLINE on STN DUPLICATE 6
TI Locating a protein-protein interaction in living cells via split
Renilla luciferase complementation.
SO Analytical chemistry, (2003 Aug 15) Vol. 75, No. 16, pp. 4176-81.
Journal code: 0370536. ISSN: 0003-2700.
AU Kaihara Asami; Kawai Yasutoshi; Sato Moritoshi; Ozawa Takeaki; Umezawa
Yoshio
AN 2003552461 MEDLINE

L61 ANSWER 11 OF 27 MEDLINE on STN DUPLICATE 7
TI Monitoring protein-protein interactions using split synthetic
renilla luciferase protein-fragment-assisted
complementation.
SO Analytical chemistry, (2003 Apr 1) Vol. 75, No. 7, pp. 1584-9.
Journal code: 0370536. ISSN: 0003-2700.
AU Paulmurugan R; Gambhir S S
AN 2003186446 MEDLINE

L61 ANSWER 12 OF 27 MEDLINE on STN DUPLICATE 8
TI Noninvasive imaging of protein-protein interactions in living subjects by
using reporter protein complementation and reconstitution strategies.
SO Proceedings of the National Academy of Sciences of the United States of

America, (2002 Nov 26) Vol. 99, No. 24, pp. 15608-13. Electronic
Publication: 2002-11-18.

Journal code: 7505876. ISSN: 0027-8424.

AU Paulmurugan R; Umezawa Y; Gambhir S S

AN 2002704588 MEDLINE

L61 ANSWER 13 OF 27 MEDLINE on STN DUPLICATE 9

TI Assay and screening methods for bioactive substances based on cellular
signaling pathways.

SO Journal of biotechnology, (2002 Feb) Vol. 82, No. 4, pp. 357-70. Ref: 17
Journal code: 8411927. ISSN: 0168-1656.

AU Umezawa Yoshio

AN 2002255672 MEDLINE

L61 ANSWER 14 OF 27 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 10

TI A novel, two-component system for cell lethality and its use in
engineering nuclear male-sterility in plants

SO Plant Journal [Plant J.], (20020700) vol. 31, no. 1, pp. 113-125.
ISSN: 0960-7412.

AU Burgess, D.G.; Ralston, E.J.; Hanson, W.G.; Heckert, M.; Ho, M.; Jenq, T.;
Palys, J.M.; Tang, Keliang; Gutterson, N.

AN 2003:10260 LIFESCI

L61 ANSWER 15 OF 27 MEDLINE on STN DUPLICATE 11

TI Split luciferase as an optical probe for detecting
protein-protein interactions in mammalian cells based on protein splicing.

SO Analytical chemistry, (2001 Jun 1) Vol. 73, No. 11, pp. 2516-21.
Journal code: 0370536. ISSN: 0003-2700.

AU Ozawa T; Kaihara A; Sato M; Tachihara K; Umezawa Y

AN 2001335602 MEDLINE

L61 ANSWER 16 OF 27 MEDLINE on STN DUPLICATE 12

TI Isolation and properties of the luciferase stored in the ovary of the
scyphozoan medusa *Periphylla periphylla*.

SO The Biological bulletin, (2001 Dec) Vol. 201, No. 3, pp. 339-47.
Journal code: 2984727R. ISSN: 0006-3185.

AU Shimomura O; Flood P R; Inouye S; Bryan B; Shimomura A

AN 2002056155 MEDLINE

L61 ANSWER 17 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Luciferase of *Cypridina hilgendorffii*, and its cDNA cloning and expression
SO U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 930,486, abandoned.

CODEN: USXXAM

IN Kazami, Jun; Nakamura, Haruji; Goto, Toshio

AN 1997:140387 HCAPLUS

DN 126:182299

OREF 126:35101a,35104a

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PI US 5604123	A	19970218	US 1994-260042	19940615

L61 ANSWER 18 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Method, apparatus, and indicator for indicating evaporable hydrocarbons or
environmental poisons in water or other liquids

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

IN Kroneld, Rolf

AN 1993:141700 HCAPLUS

DN 118:141700

OREF 118:24258h,24259a

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

PI WO 9302208 A1 19930204 WO 1992-FI211 19920709
W: CA, JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE

L61 ANSWER 19 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Thermostable luciferases and their manufacture by expression of firefly
luciferase cDNA mutants in host cells
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
IN Naoki, Kajiyama; Eiichi, Nakano
AN 1993:206974 HCAPLUS
DN 118:206974
OREF 118:35461a

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 524448	A1	19930127	EP 1992-110808	19920626
	EP 524448	B1	19990609		
	R: CH, DE, DK, FR, GB, LI, NL				
	JP 05244942	A	19930924	JP 1992-131057	19920522
	JP 3048466	B2	20000605		
	US 5229285	A	19930720	US 1992-903047	19920623

L61 ANSWER 20 OF 27 MEDLINE on STN DUPLICATE 13
TI Specific synthesis of adenosine(5')tetraphospho(5')nucleoside and
adenosine(5')oligophospho(5')adenosine (n > 4) catalyzed by firefly
luciferase.
SO European journal of biochemistry / FEBS, (1993 Feb 15) Vol. 212, No. 1,
pp. 263-70.
Journal code: 0107600. ISSN: 0014-2956.
AU Ortiz B; Sillero A; Gunther Sillero M A
AN 93185632 MEDLINE

L61 ANSWER 21 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Mutant luciferase of a firefly, mutant luciferase genes, novel recombinant
DNAs containing the genes, and a method of producing mutant luciferase
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
IN Kajiyama, Naoki
AN 1992:52954 HCAPLUS
DN 116:52954
OREF 116:9039a,9042a

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 449621	A1	19911002	EP 1991-302717	19910327
	EP 449621	B1	19960828		
	R: CH, DE, FR, GB, LI, NL				
	JP 03285683	A	19911216	JP 1990-294258	19901030
	US 5219737	A	19930615	US 1991-675211	19910326
	US 5330906	A	19940719	US 1993-76042	19930615

L61 ANSWER 22 OF 27 MEDLINE on STN DUPLICATE 14
TI Synthesis of dinucleoside polyphosphates catalyzed by firefly luciferase.
SO European journal of biochemistry / FEBS, (1991 Dec 5) Vol. 202, No. 2, pp.
507-13.
Journal code: 0107600. ISSN: 0014-2956.
AU Sillero M A; Guranowski A; Sillero A
AN 92104173 MEDLINE

L61 ANSWER 23 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Luciferase cDNA of Luciola cruciata and its expression in Escherichia
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF

IN Tatsumi, Hiroki; Masuda, Tsutomu; Nakano, Eiichi
AN 1990:586082 HCAPLUS
DN 113:186082
OREF 113:31367a,31370a

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02065780	A	19900306	JP 1988-216229	19880901
	JP 07071485	B	19950802		
	EP 364707	A1	19900425	EP 1989-116099	19890831
	R: CH, DE, FR, GB, LI, NL				

L61 ANSWER 24 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Cloning and expression of firefly luciferase gene in Escherichia coli
SO Eur. Pat. Appl., 35 pp.
CODEN: EPXXDW

IN Masuda, Tsutomu; Tatsumi, Hiroki; Nakano, Eiichi
AN 1989:510337 HCAPLUS
DN 111:110337
OREF 111:18403a,18406a

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 301541	A2	19890201	EP 1988-112233	19880728
	EP 301541	A3	19891011		
	EP 301541	B1	19940119		
	R: CH, DE, FR, GB, LI, NL				
	JP 01034286	A	19890203	JP 1987-187724	19870729
	JP 01034289	A	19890203	JP 1987-187725	19870729
	JP 01051086	A	19890227	JP 1987-205194	19870820
	JP 06012995	B	19940223		
	US 4968613	A	19901106	US 1988-224445	19880726

L61 ANSWER 25 OF 27 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 15
TI The function of coenzyme A in luminescence.
SO BIOCHIM ET BIOPHYS ACTA, (1958) Vol. 27, No. 3, pp. 519-532.
AU AIRTH, R. L.; RHODES, W. C.; McELROY, W. D.
AN 1958:39645 BIOSIS

L61 ANSWER 26 OF 27 NTIS COPYRIGHT 2008 NTIS on STN
TI Imaging Regulated Protein-Protein Interaction in Cells and Living
Animals by Enhanced Luciferase protein Fragment
Complementation.
NR PB2007-103209/XAB; PAT-APPL-10-912 862
51p; Filed 6 Aug 04
AU Worms, D. P.; Luker, K.; Luker, G.
AN 2007(11):00398 NTIS

L61 ANSWER 27 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Imaging CXCR4 Signaling with Firefly Luciferase Complementation
SO Analytical Chemistry (Washington, DC, United States) ACS ASAP
CODEN: ANCHAM; ISSN: 0003-2700
AU Luker, Kathryn E.; Gupta, Mudit; Luker, Gary D.
AN 2008:681907 HCAPLUS

=> d ab 6-9,12,13,15

L61 ANSWER 6 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
AB Unavailable

L61 ANSWER 7 OF 27 MEDLINE on STN DUPLICATE 5

L61 ANSWER 8 OF 27 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

L61 ANSWER 9 OF 27 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AB

Homodimeric protein interactions are potent regulators of cellular functions, but are particularly challenging to study in vivo. We used a split synthetic renilla luciferase (hRLUC) complementation-based bioluminescence assay to study homodimerization of herpes simplex virus type 1 thymidine kinase (TK) in mammalian cells and in living mice. We quantified and imaged homodimerization of TK chimeras containing N-terminal (N-hRLUC) or C-terminal (C-hRLUC) fragments of hRLUC in the upstream and downstream positions, respectively (tail-to-head homodimer). This was monitored using luminometry (68-fold increase, and was significantly (P 0.01) above background light emission) and by CCD camera imaging of living mice implanted with ex vivo transfected 293T cells (2.7-fold increase, and is significantly (P 0.01) above background light emission). We also made a mutant-TK to generate N-hRLUC mutant TK and mutant TK-C-hRLUC by changing a single amino acid at position 318 from arginine to cysteine, a key site that has previously been reported to be essential for TK homodimerization, to support the specificity of the hRLUC complementation signal from TK homodimerization. Ex vivo substrate (8-3H Penciclovir) accumulation assays in 293T cells expressing the TK protein chimeras showed active TK enzyme. We also devised an experimental strategy by constructing variant TK chimeras (possessing extra N-hRLUC or C-hRLUC 'spacers') to monitor incremental lack of association of the tail-to-head TK homodimer. Application of this potentially generalizable assay to screen for molecules that promote or disrupt ubiquitous homodimeric protein - protein interactions could serve not only as an invaluable tool to understand biological networks but could also be applied to drug discovery and validation in living subjects.

L61 ANSWER 12 OF 27 MEDLINE on STN DUPLICATE 8

AB In this study we have developed bioluminescence-imaging strategies to noninvasively and quantitatively image protein-protein interactions in living mice by using a cooled charge-coupled device camera and split reporter technology. We validate both complementation and intein-mediated reconstitution of split firefly luciferase proteins driven by the interaction of two strongly interacting proteins, MyoD and Id. We use transient transfection of cells and image MyoD-Id interaction after induction of gene expression in cell culture and in cells implanted into living mice. Techniques to study protein-protein interactions in living subjects will allow the study of cellular networks, including signal transduction pathways, as well as development and optimization of pharmaceuticals for modulating protein-protein interactions.

L61 ANSWER 13 OF 27 MEDLINE on STN DUPLICATE 9

AB Assay and screening methods for bioactive substances based on cellular signaling pathways are presented. Examples include: (1) intracellular protein phosphorylation and protein-protein interaction, (1-i) a new assay method for evaluating chemical selectivity of agonists for insulin signaling pathways based on agonist-induced phosphorylation of a target peptide, (1-ii) an SPR-based screening method for agonist selectivity for insulin signaling pathways based on the binding of phosphotyrosine to its specific binding protein, (1-iii) a fluorescent indicator for tyrosine phosphorylation-based insulin signaling pathways, and (1-iv) split luciferase as an optical probe for detecting protein-protein interactions in mammalian cells based on protein splicing; (2) a screening method for antigen-specific IgE using mast cells based on intracellular calcium signaling; (3) a screening method for substrates of multidrug resistance-associated protein (MRP); and (4) fluorescent indicators for cyclic GMP based on cyclic GMP-dependent protein kinase Ialpha and green fluorescent proteins.

L61 ANSWER 15 OF 27 MEDLINE on STN DUPLICATE 11

AB We describe a new method for detecting protein-protein interactions in intact mammalian cells; the approach is based on protein splicing-induced complementation of rationally designed fragments of firefly luciferase. The protein splicing is a posttranslational protein modification through which inteins (internal proteins) are excised out from a precursor fusion protein, ligating the flanking exteins (external proteins) into a contiguous polypeptide. As the intein, naturally split DnaE from *Synechocystis* sp. PCC6803 was used: The N- and C-terminal DnaE, each fused respectively to N- and C-terminal fragments of split luciferase, were connected to proteins of interest. In this approach, protein-protein interactions trigger the folding of DnaE intein, wherein the protein splicing occurs and thereby the extein of ligated luciferase recovers its enzymatic activity. To test the applicability of this split luciferase complementation, we used insulin-induced interaction between known binding partners, phosphorylated insulin receptor substrate 1 (IRS-1) and its target N-terminal SH2 domain of PI 3-kinase. Enzymatic luciferase activity triggered by insulin served to monitor the interaction between IRS-1 and the SH2 domain in an insulin dose-dependent manner, of which amount was assessed by the luminescent intensity. This provides a convenient method to study phosphorylation of any protein or interactions of integral membrane proteins, a class of molecules that has been difficult to study by existing biochemical or genetic methods. High-throughput drug screening and quantitative analysis for a specific pathway in tyrosine phosphorylation of IRS-1 in insulin signaling are also made possible in this system.

=> fil .becpat
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
60.33	60.54

FILES 'BIOTECHDS, HCAPLUS, WPIDS' ENTERED AT 16:08:09 ON 25 JUN 2008
 ALL COPYRIGHTS AND RESTRICTIONS APPLY. SEE HELP USAGETERMS FOR DETAILS.

3 FILES IN THE FILE LIST

=> s (124 or 148) and wo/pc and pry<=2004 and py>=2005 range=2005,
 FILE 'BIOTECHDS'

19609 WO/PC
 25470 PRY<=2004
 (PRY<=2004)
 86592 PY>=2005
 (PY>=2005)

L62 1 (L16 OR L40) AND WO/PC AND PRY<=2004 AND PY>=2005

FILE 'HCAPLUS'

264945 WO/PC
 795595 PRY<=2004
 4370090 PY>=2005

L63 5 (L19 OR L43) AND WO/PC AND PRY<=2004 AND PY>=2005

FILE 'WPIDS'

470791 WO/PC
 1504558 PRY<=2004
 3074956 PY>=2005
 (PY>=2005)

L64 1 (L23 OR L47) AND WO/PC AND PRY<=2004 AND PY>=2005

TOTAL FOR ALL FILES

L65 7 (L24 OR L48) AND WO/PC AND PRY<=2004 AND PY>=2005

=> dup rem l65

PROCESSING COMPLETED FOR L65

L66 5 DUP REM L65 (2 DUPLICATES REMOVED)

=> d tot

L66 ANSWER 1 OF 5 BIOTECHDS COPYRIGHT 2008 THOMSON REUTERS on STN

TI New isolated, characterized and functional complementation system comprising a protein fused to one luciferase fragment of a pair of firefly luciferase fragments, useful in protein-protein interaction assays; production of a recombinant fusion protein having luminescence useful for detection of protein-protein interaction and in high throughput screening

AU PIWNICA-WORMS D; LUKER K; LUKER G

AN 2005-09455 BIOTECHDS

PI WO 2005015161 17 Feb 2005

L66 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Detection of protein translocation by β -galactosidase reporter fragment complementation

SO PCT Int. Appl., 62 pp.

CODEN: PIXXD2

IN Blau, Helen M.; Wehrman, Thomas S.

AN 2005:1259298 HCAPLUS

DN 144:17837

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005113838	A2	20051201	WO 2005-US17530	20050518 <--
WO 2005113838	A3	20070524		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA			
US 20050287522	A1	20051229	US 2005-132764	20050518 <--
EP 1766095	A2	20070328	EP 2005-751854	20050518 <--
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU			

L66 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Split enzyme linked immunosorbent for detecting analyte in solution

SO PCT Int. Appl., 47 pp.

CODEN: PIXXD2

IN Weiss, Shimon; Wu, Anna M.; Perry, L. Jean

AN 2005:1103480 HCAPLUS

DN 143:361174

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005094441	A2	20051013	WO 2005-US8621	20050314 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,			

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
 SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

L66 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
 TI Noninvasive sensing and imaging of protein nuclear transport using
 reconstitution of split Renilla luciferase by protein
 splicing
 SO PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
 IN Umezawa, Yoshio; Ozawa, Takeaki
 AN 2005:1004878 HCAPLUS
 DN 143:302037

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005085439	A1	20050915	WO 2005-JP4591	20050309 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2559299	A1	20050915	CA 2005-2559299	20050309 <--
EP 1731603	A1	20061213	EP 2005-720845	20050309 <--
R: CH, DE, FR, GB, LI, NL, SE				
US 20070178464	A1	20070802	US 2006-591990	20061020 <--

L66 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
 TI Method for identification of fragmentation sites in a reporter protein in
 the development of split protein sensors
 SO PCT Int. Appl., 91 pp.
 CODEN: PIXXD2
 IN Johnsson, Kai; Tafelmeyer, Petra
 AN 2005:371419 HCAPLUS
 DN 142:424833

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005038050	A1	20050428	WO 2004-EP11289	20041008 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2542182	A1	20050428	CA 2004-2542182	20041008 <--
EP 1670940	A1	20060621	EP 2004-765898	20041008 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
US 20070178460 A1 20070802 US 2007-575374 20070103 <--

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SESSION

FULL ESTIMATED COST

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